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| SCOTT W HEWETT 400 WEST THIRD STREET #223 SANTA ROSA, CA 95401 | | | CARLSON, JEFFREY D | |
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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 09/625,442
Filing Date: July 26, 2000
Appellant(s): HUNG, PATRICK SIU-YING

Scott Hewett
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 1/30/06 appealing from the Office action mailed 5/12/05.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

No amendment after final has been filed.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

| | | |
|-----------|-----------------|--------|
| 5,523,794 | Mankovitz et al | 6-1996 |
| 5,221,838 | Gutman et al | 6-1993 |

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 2-9, 11-13, 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mankovitz et al (US5523794).

Regarding claims 5, 8, Mankovitz et al teaches a portable coupon device (portable data coupon) that wirelessly receives data to be stored in the device. The data can then be processed and displayed by the user buttons. The device can display stored coupons as barcodes which are taught to be capable of being scanned from the display screen at a point of sale (POS) [fig 1a, 1b]. The device has a wireless receiver 16, processor, RAM and ROM memory, program and display [fig 2]. At least the display driver program [col 4 lines 19-25] manipulates the stored coupon data to render a barcode on the display. The Infrared (IR) wireless receiver 16 is taken to be a receiver configured to receive an electronic wireless transmission (an IR signal) containing coupon information. Regarding the conversion between barcode formats, applicant

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acknowledges that there are a plurality of known barcode standards such as UPC, UCC/EAN-128, etc. Mankovitz et al teaches that the portable device includes programming to convert a single coupon into several formats such as alphanumeric and barcode. The alphanumeric format is easily understandable by humans while the barcode is easily understandable by machines. It would have been obvious to one of ordinary skill at the time of the invention to have provided the ability for the device of Mankovitz et al to convert the coupon data between several human-readable languages (English, Spanish, etc.) as well as several machine-readable barcode symbologies/languages/formats (UPC, UCC/EAN-128, etc.) so that different human operators and different POS scanners requiring various barcode formats can process the coupons, for added flexibility and universality.

Regarding claims 11, 24, the “means for improving” [the scanning] is met by the inherent characteristics of Mankovitz et al’s LCD display. Applicant acknowledges that LCD displays inherently provide a strobe rate and persistence level. Mankovitz et al’s strobe rate and persistence level inherently are of sufficient magnitudes to make the invention work; the displayed barcodes can be scanned with a scanning device as stated by Mankovitz et al. Mankovitz et al’s performance is taken to be an *improved* performance over an LCD having lower strobe rates and/or persistence levels. Applicant’s claim 11 further defines the “means for improving” [scanning] by describing the persistence as “sufficient...for scanning.” The same applies for Mankovitz et al; there are “sufficient” levels of inherent persistence and inherent strobe rate to enable scanning of the displayed barcodes.

Regarding claims 2-4, 9, 12, 13, Mankovitz et al teaches an LCD display 22 [col 4 lines 25-27]. Official Notice is taken that it is well known that the visual quality of a barcode is related to the success in registering an error-free scan. Bushnell's Bar Code reference supports this and one of ordinary skill would recognize the same relationship between visual clarity and scanning success regardless of whether the barcode was printed or electronically displayed. It therefore would have been obvious to one of ordinary skill at the time of the invention to have provided the electronically displayed barcode of Mankovitz et al as a high quality barcode display so as to avoid errors. Official Notice is further taken that it is well known to provide electronic displays with various levels of visual clarity by manipulating pixel resolution and sizing as well through the use of anti-reflective contrast coatings. It would have been obvious to one of ordinary skill at the time of the invention to have provided any type of well known LCD display having sufficient pixel resolution and sizing as well as well known contrast features such as anti-reflective coatings in order to provide a display of sufficient clarity so that a displayed barcode could be capable of being scanned successfully. Further, the plurality of values for each of the various display characteristics disclosed as various operative examples suggests a lack of criticality regarding those characteristic values. One of ordinary skill would have been clearly motivated to routinely experiment with such display characteristics in the display design so that the barcodes were displayed with sufficient clarity so that they can be successfully scanned at the POS. It would have been obvious to one of ordinary skill at the time of the invention that higher quality displays would improve the scanning accuracy and one of ordinary skill would have

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found it obvious to have provided the highest display possible using the known techniques of pixel size, resolution and anti-reflective contrast coating so as to maximize accuracy of scanning. Further, applicant states that displays of lower resolution/quality can still be used with success with scanning systems which require less resolution. The scan rate is dependant on the related tolerances/qualities not only of the barcode, but also on the scanning device. Scanning a displayed barcode is the intent of Mankovitz et al and it would have been obvious to one of ordinary skill at the time of the invention to have provided sufficient resolution/contrast/clarity for the particular requirements of the scanning hardware. Regarding claim 9, the "sufficiently high" strobe rate is met by Mankovitz et al similar to claim 11.

Regarding claim 6, Mankovitz et al does not specify the particular file structure for the stored data, yet it would have been obvious to one of ordinary skill at the time of the invention to have to have used any type of file structure, including related or hierarchical file structure as is well known. The particular file structure chosen lacks criticality with respect to the device operation.

Regarding claim 7, Mankovitz et al teaches that the source coupon data is encrypted to ensure that only authorized portable data coupons (portable coupon devices 10) can use the coupons/data [col 5 lines 36-40]. Applicant argues that the disclosure does not specify whether the decryption occurs in the controller or in the portable device. It would have been otherwise obvious to one of ordinary skill at the time of the invention to have provided the required decryption functionality in the portable coupon device so that pirated/hacked/copycat portable coupon devices lacking

such decryption ability cannot be used with the system of Mankovitz et al, thus providing the authorization security described by Mankovitz et al.

Claim 8 is alternatively rejected under 35 U.S.C. 103(a) as being unpatentable over Mankovitz et al in view of Gutman et al (US5221838). Mankovitz et al teaches programming to convert between different coupon formats. Gutman et al teaches a portable electronic wallet that stores data received through scanning printed barcodes [abstract, col 5]. Gutman et al also acknowledges the plurality of barcode format/symbology standards. Gutman et al teaches that several different bar code formats can be supported by the device. It would have been obvious to one of ordinary skill at the time of the invention to have provided programming with Mankovitz et al to convert between various formats of displayed bar-coded coupons so as to increase flexibility and universality of the device.

(10) Response to Argument

Applicant argues that Mankovitz et al does not teach a receiver to receive an electronic wireless transmission containing coupon information. Applicant's specification describes the wireless receiver as a wireless modem [page 4 line 17] or similar [page 8 line 18]. Applicant amended the claims on 1/20/04 to limit the receiver as one which receives an "electronic" signal. Applicant argues on 1/28/05 that while RF (radio frequency) signals are an example of "electronic" signals, IR (infrared) signals are not. As the Examiner has stated, even though the IR may be optically perceivable to a human (in the visible spectrum), the transmission is nonetheless taken as "electronic."

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Applicant's arguments that IR differs from and may be less desirable than RF are narrower than the present claim scope. Both RF and IR are in the electromagnetic spectrum and are taken to be "electronic" transmissions.

Applicant argues that because Mankovitz et al teaches coupons for local dealers, that converting between barcode formats is not obvious and teaches away from such. Examiner disagrees. Even in a local environment, different retailers could support/employ/honor different barcode formats for an advertised product.

Applicant argues that Mankovitz et al does not teach the specific physical display properties and argues that Mankovitz et al does not "improve" the display. As stated above, one of ordinary skill would have been clearly motivated to routinely experiment with known display characteristics in the display design so that the barcodes were displayed with sufficient clarity so that they can be operatively scanned at the POS. Further, applicant discloses that displays of lower resolution/quality can still be used with success with scanning systems which require less resolution. If Mankovitz et al's barcodes and scanner equipment quality are anything other than the worst possible quality/tolerance, than the equipment and barcodes used by Mankovitz et al can be said to be of "improved quality." The means for which this improved quality is achieved is the sufficient persistence, strobing and contrast which enables the system to operate. Scanning a displayed barcode is the intent of Mankovitz et al and it would have been obvious to one of ordinary skill at the time of the invention to have provided sufficient resolution/contrast/clarity for the particular requirements of the scanning hardware to be used.

Applicant's argument regarding the Official Notice taken regarding the knowledge of how to provide a quality electronic display by manipulating pixel resolution, sizing and anti-reflective coating appears to only challenge the conclusion that it would have been obvious to have applied such technology to a barcode display. Applicant is not believed to have seasonably challenged the initial Official Notice regarding general knowledge that pixels and anti-reflective contrast coatings are ways to achieve a quality display. Nonetheless, Examiner had also previously included the Bushnell's Bar Code reference as supporting evidence. Examiner also points out that US Patent 5521371 to Hotta et al teaches the desire improved scanning accuracy via a high contrast display when displaying an electronic barcode on an electronic display [col 4 lines 3-6].

Applicant takes some issue with the Examiner's use of the term "visual quality" although it is pointed out that Examiner uses this term to represent visually presented barcodes – regardless of whether they are to be printed or electronically displayed. Visual clarity is notoriously important when scanning a barcode.

Applicant argues that his claims are directed to improved displays and that the applied art is not concerned with "improving" displays. If the art teaches or is motivated to provide the structure or steps of applicant's invention, the claims are met. The art merely must possess the end result, not necessarily any recognition of improvement over inferior disclosures. Applicant can't simply claim that the invention is superior without claiming what makes it superior. Examiner has rejected the claim language with suitable rejections. The art need not recognize the degree to which any improvement is achieved. Further as pointed out several times, applicant himself has defined

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“improved” and his “means for improving” as merely “sufficient” characteristics; the applied art on its face is taken to operate “sufficiently” and therefore meets the language. Lastly, Hotta et al is an example of known desires for improved/high quality electronic displays which are designed to be scanned by a bar code reader.

Applicant argues that Mankovitz et al does not provide a means for improving scan rate. As stated above, Mankovitz et al provides “sufficient” strobe rate and “sufficient” persistence so that the displayed coupons can be read with the scanning hardware. Claims 9 and 11 indicates that “sufficient” persistence and “sufficient” strobe rate provide such a “means.” Applicant argues that “normally” devices do not include sufficiently high display quality so that barcodes can be scanned from them. Mankovitz and the Official Notice provide the motivation for a high quality display – so that the barcodes taught can be scanned accurately.

Applicant argues that the inventor is the only one to identify the problem of scan errors when scanning a screen-displayed barcode. Examiner disagrees and points out that others recognize a relationship between the display quality of a barcode and its ability to be scanned with few errors. Further, one of ordinary skill would find it obvious to employ known techniques to display a high quality barcode so that scanning errors are reduced.

Applicant argues that Mankovitz et al does not teach a configurable portable electronic communication device. First, this language is presented in the preamble to introduce the apparatus. It is the body of the claim that sets forth structural features which define such a device; the limitations found in the claim body are all met by the

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cited art, therefore the cited art provides “a configurable portable electronic communication.” Nonetheless, the apparatus of Mankovitz et al is clearly *configurable* so as to acquire, store and present various electronic coupons, is clearly *portable*, is clearly *electronic*, clearly *communicates with* the coupon transmitter, clearly *communicates* coupon information to the POS and is clearly a *device*. The cited art meets the plain and ordinary meaning of the argued phrase. Applicant argues that the specification defines such a device. Page 3 lines 24-26 and page 4 lines 14-13-21 provide examples of qualifying devices, but the open-ended “such as” language merely provides examples rather than an explicit definition with reasonable clarity, deliberateness and precision. See MPEP 2111.01, Teleflex Inc. v. Ficosa North America Corp., 63 USPQ2d 1374 (CA FC 2002), Rexnord Corp. v. Laitram Corp., 60 USPQ2d 1851 (CA FC 2001). Further, application provides examples of a wireless PDA or a “handheld computer.” The device of Mankovitz et al is taken to be a handheld computer. Applicant’s argument that the device of Mankovitz et al is a “specialized article” and cannot be a configurable device is not convincing.

Applicant argues that Gutman et al does not discuss coupons. While Gutman et al does not mention coupons, the device is for an electronic wallet that stores scannable product information. Gutman et al need not teach the entirety of the claim elements, as the primary reference Mankovitz et al provides most of them. Gutman et al is used as evidence and motivation for the obviousness of converting between multiple supported barcode formats.

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

Respectfully submitted,

Ms. B. C.

Eric Stamber

Old Champagne